BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an elevational view illustrating one embodiment of the instant invention with protective cap removed;

FIG. 2 is a cross sectional view of the device;

FIG. 3 is a perspective view illustrating operation and application of the device; and

FIGS. 4-7 are graphs relating to the invention and performance thereof.

DETAILED DESCRIPTION OF THE INVENTION

As required, detailed embodiments of the instant invention are disclosed herein, however, it is to be understood that the disclosed embodiments are merely exemplary of the invention which may be embodied in various forms. Therefore, specific functional and structural details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention in virtually any appropriately detailed structure.

Some basic requirements must be satisfied to ensure that the device described functions safely and as desired. Firstly, the system preferably should not be comprised of any "small parts" which may be considered hazards for inhalation,

ingestion or choking by children under age three or who still put small objects into their mouths. Secondly, the system must only utilize materials and ingredients which are suitable for food contact or human consumption. Thirdly, the device of the instant invention must be capable of delivering precisely controlled quantities of the decorating agent. Lastly, the device must not cause significant deformation of the surface of the food to be decorated.

Indicia may be created on the surface of an object by deposition of a substance onto the surface of said object. For example, a liquid paint may be applied to a piece of wood by means of brushing or spraying. Or, the graphite/wax mixture in a pencil lead may be applied to a piece of paper by drawing the tip of the pencil across the paper. Sand paintings may be created by simply permitting one color of sand to fall onto a "canvas" of another color of sand. In each case, the force generated on the substrate by the application means must not significantly exceed the yield strength of the substrate. For example, one could not deposit heavy stones on the surface of a pool of water and expect the stones to remain on the surface of the water. Similarly, wet tissue paper does not provide a suitable substrate when attempting to write with a ball point pen. In both of the above examples, the substrate is incapable of supporting the writing process. If a substrate is to be successfully written upon, the force on the substrate generated by the writing process must be not be significantly greater than the yield point of the substrate. If a non-contact means, such as spraying is used to apply the writing substance, the force generated by the spraying process must be less than

the yield strength of the substrate or the substrate will be deformed. If a contact method of applying indicia is used such as that employed through use of a pencil or a felt-tipped marker, then the yield strength of the substrate must not be significantly less than the forces generated by the writing process including the force applied to the substrate which is a result of the force transmitted through the pencil or marker tip. Traditional writing instruments such as pens and markers function well on the substrates for which they were designed to be used such as paper, wood and cardboard. However, if one attempts to use these instruments on surfaces (substrates) which are very soft, ie: have low yield points, these instruments ultimately fail. For example, if one wishes to decorate the surface of a freshly frosted cookie or cake, a pencil will not work. Similarly, ball point pens and felt-tipped markers will also fail. Failure is manifested primarily in two modes. First, the soft frosting may not provide sufficient support to permit satisfactory transfer of the writing agent from the tip of the writing instrument. For pencils and ball point pens to function properly, a certain amount of friction must exist between the writing tip and the surface to be written upon. With very soft substrates, this degree of friction does not exist. Second, the relatively hard tips of these writing instruments will gouge and deform very soft substrates, such as for example, fresh frosting.

Most fresh frostings may be characterized as non-Newtonian, thixotropic fluids with suspended particles. Because these materials are neither solids nor liquids, measurement of some of their physical parameters can be problematic. One of